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[General publications]

[G-1] Safety afloat for owners of pleasure boats and small commercial craft. 1968.



# safety afloat '68

R OWNERS OF PLEASURE BOATS  
D SMALL COMMERCIAL CRAFT



DEPARTMENT OF TRANSPORT  
OTTAWA CANADA



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# *Safety Afloat*

## FOR OWNERS OF SMALL BOATS

Safety Afloat, 1968, which supersedes all previous editions, is based on the Small Vessel Regulations and other statutes. Those who require the full text of the various laws on small boat operation should consult the following references, obtainable from the Queen's Printer, Ottawa, at the prices shown.

SOR/62-154	Small Vessel Regulations .....	35¢
Chap. 43 1960/61	An Act to amend the Criminal Code (assented to 13 July 1961)	35¢
Chap. 193 RSC 1952	The Navigable Waters Protection Act .....	35¢
SOR/62-319	Upper Niagara River Regulations ..	25¢
SOR/62-46	Private Buoy Regulations .....	25¢
SOR/54-586	Regatta and Marine Parade Safety Regulations .....	25¢
SOR/64-121	Liquefied Petroleum Gas Regulations .....	25¢
SOR/60-212	Department of Transport Canal Regulations .....	35¢

The following regulations may be obtained, free of charge, from the Department of Transport, Ottawa.

SOR/65-395	Collision Regulations
SOR/54-675	Rules of the Road for the Great Lakes

If ordered from the Queen's Printer, the last two above-mentioned will cost 25¢ each.

*Produced by*  
Information Services Division  
Department of Transport  
*under authority of*  
the Minister, Hon. Paul T. Hellyer

(C)

ROGER DUHAMEL, F.R.S.C.  
Queen's Printer and Controller of Stationery  
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Canadian Buoyage System .....	"
Lights .....	"

This booklet has been prepared to spread knowledge of the Small Vessel Regulations — knowledge that can drastically cut the needless toll in property damage and human suffering, and make for safety afloat for you, your family and others.

It is only intended to augment the excellent boating courses offered by other organizations, particularly for the inexperienced.

It asks two basic questions:

- Is your boat properly equipped?
- Do you observe the Regulations and “Rules of the Road”?

## **NUMBERING OR LICENSING YOUR BOAT**

You have just bought a boat, or are about to buy one, and you are asking yourself: "What do I do next?"

If you buy a car, the first thing you do is to license it. This is also true of pleasure boats which have propelling power, either inboard or outboard, of 10 horsepower or more and do not exceed 20 tons registered tonnage.

Non compliance with this requirement entails a fine of up to \$100. You must get a licence before the boat is operated on the water. If your motor is less than 10 horsepower, you need not get a licence, but many owners of small boats find it useful to get one anyway since it helps in cases of theft and accident.

There is an exception to the above limitations. If you intend to operate your boat on any of the following Department of Transport canals: St. Peters, Canso, St. Ours, Chambly, Ste. Anne, Carillon, Rideau, Murray and Trent, irrespective of the type or size of vessel, it is required to be licensed or registered.

### **Where do I get a licence ?**

Licences can be obtained without charge from a Customs Officer at any Customs and Excise office.

Pleasure vessels over 20 tons do not need a licence but are, instead, required to be registered with the Registrar of Shipping, Department of Transport, in Ottawa or any other established port of registry.

### **What else do I have to do ?**

Before the boat is operated, the licence number issued must be marked in block characters in a colour contrasting to their background and NOT LESS THAN 3 INCHES in height:

- (a) on each bow, or

- (b) on a board or boards permanently attached to the boat so that the number is clearly visible from each side.

### **What do I do if I sell or transfer ownership ?**

The licence number allotted to your boat when first licensed remains with the boat even if you sell it. Although the number remains, the licence itself must be transferred to the new owner and you should proceed as follows:

- (a) Sign and deliver to the new owner the transfer form located on the back of the existing licence; and
- (b) give notice in writing of the transfer of ownership to the Customs House that issued the existing licence, specifying the licence number and the name and address of the new owner.

### **What does the new purchaser do ?**

The new owner of the boat completes the transfer form on the back of the licence and delivers it to the Customs House of original issue. On receipt of this transferred licence the Customs House will issue the new owner with a new Vessel Licence bearing the original licence number. If the old Vessel Licence has been lost or mislaid, the new owner will complete an application giving the existing licence number.

### **What happens if a boat is destroyed or abandoned ?**

Return the licence form to the Customs Office that issued it and state reasons for doing so.

## **OVERLOADING AND OVERPOWERING**

When you buy a boat you should always make sure that it is suitable for its purpose. The following points should be very carefully considered:

- (a) is it large enough ?
- (b) will it carry safely the number of persons that I wish to have with me ?
- (c) will it be capable of carrying the power I wish to use ?

- (d) is it properly designed and strongly built ?
- (e) will it be seaworthy in high winds and rough water ?

If there is any doubt whatsoever, obtain advice from a naval architect or a reputable boat builder.

### **Overloading of rowboats**

Overloading is dangerous. Because there are so many types of small boats, specific advice to cover all contingencies about overloading is not practical. How many people can be safely carried depends on several factors: type of boat, distribution of passengers and equipment to be carried, etc. Common sense should rate highly here.

The Department of Transport issues, as a rough guide only, the following notice for posting at holiday resorts, boat hiring stations and camp sites.

<i>Length of Boat</i>	<i>Number of Persons</i>	<i>Max. Weight Load</i>
10'	2	410 lbs.
12'	3	575 lbs.
14'	4	740 lbs.
16'	5	975 lbs.

For rough water conditions it would be advisable to remove one person from the boat before starting out. However, common sense should dictate whether the boat should put out at all in bad weather, and this is particularly applicable to boats under 10 feet in length which may be suitable for operation only in calm conditions.

### **Overloading and overpowering of power boats**

Although the above rules may be considered as a guide to the loading of rowboats, they do not apply when a motor is attached to the boat. It is particularly important that an inexperienced person should be careful when attaching his motor to a hired boat. Concentrating on starting his motor, he frequently ignores the rudder position so that the quick turn, made by the boat on starting, results in a capsiz.

The desirability of having a sound recommendation on the loading and powering of small outboard boats is of such importance that this is now required by regulations.

## RECOMMENDED SAFE LOAD AND HORSEPOWER

The law requires that every pleasure boat 16 feet long, or under, powered with an outboard motor or motors totalling 10 horsepower or more, shall carry a plate issued by the Department of Transport stating the maximum load and horsepower recommended for it.

The Department of Transport recommended horsepower capacities are based on the actual performance of a large number of outboard motorboats tested on standard evaluation courses. Canadian boat manufacturers and importers participate in these tests, which are held frequently for the purpose of assessing and comparing the performance of the latest boat designs against the recommended capacities.

The importance of efficient motor wells and of motor and steering controls forward of amidships is reflected in the horsepower ratings.

The capacity plates are dark blue with silver lettering and carry this wording:



Applications for these plates are obtainable from any Customs Office, Steamship Inspection Office, or from the Department of Transport, Ottawa. Fill in all particulars, including the measurements asked for, and send the form, in the addressed postage free envelope provided, to Ottawa, together with the fee of \$1.00.

The plate will be sent to you as soon as possible, and should be affixed to your boat in an easily visible position. It is good for the life of the boat, and does not need to be renewed.

These plates are intended only as a guide to boaters, particularly those without a great deal of experience in handling power craft, and should not be taken as giving a firm indication of the safe capacities of boats in all circumstances. It is obvious that a safe load in calm water may be a dangerous overload in rough water. Similarly, while it may be dangerous to operate a particular boat under high power when it is carrying several people, it may be quite safe to operate it under the same power with only one or two persons aboard. It is also recognized that, when used in certain favourable conditions and particularly when under the control of experienced boaters, many boats can be safely operated with loads heavier than those recommended or with engines of greater power than those recommended. Accordingly, there is no legal compulsion to observe the recommendations contained in the plates, although all boaters are urged to remain within these limits unless they know by experience that the limits may be exceeded with safety in the prevailing circumstances.

Many Canadian boatbuilders and distributors sell their boats complete with D.O.T. load and capacity plates.

## TOURISTS

### United States tourists in Canada

Visiting United States pleasure boats equipped in accordance with the relevant United States laws are considered to comply with the Canadian regulations. Such equipment must be in satisfactory condition and must be used only in

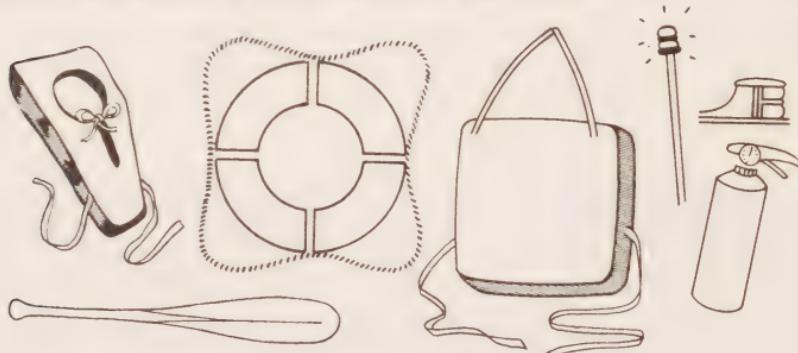
the boat with which it was imported. A boat brought into Canada by a United States tourist and not remaining in Canada is not required to have a Canadian licence or Department of Transport boat capacity plate, provided that the usual Customs permit is obtained.

Citizens of the United States or other non-Canadians who maintain their boats permanently in Canada are required to comply with the Canadian regulations in all respects.

### **Canadian tourists in the United States**

Canadian pleasure boats temporarily using navigable waters of the United States may carry equipment as required by the Canadian Small Vessel Regulations in lieu of the equipment which would otherwise be required by the United States Motor Boat Act.

However, owners of Canadian pleasure boats who intend to cruise in United States waters should obtain a copy of the relevant state boating laws, because the United States and state regulations may differ from the Motor Boat Act and from regulations of other states of the Union.



### **What lifesaving equipment must I carry ?**

Canadian-owned pleasure boats, or boats wholly maintained in Canada, must comply with the regulations, and all lifesaving equipment must bear the approval of the Department of Transport. No other equipment will be accepted.

Pleasure boats registered or licensed outside Canada may carry, in lieu of the lifejackets prescribed, lifejackets approved by the country where they are registered or licensed.

## FIRE EXTINGUISHERS

Fire extinguishers required by Small Vessel Regulations shall be of a type approved for marine use by:

- (1) Underwriters Laboratories, Inc.
- (2) Underwriters Laboratories of Canada, or
- (3) The British Ministry of Transport or  
Ministry of Civil Aviation

There are three types of fires, designated Class "A", "B" and "C", for which the most suitable approved extinguishers carry the corresponding letter on the approval label.

Class "A" fires occur in ordinary combustible material such as wood, cloth and paper. Class "A" extinguishers usually contain a large percentage of water and are effective against such fires.

Class "B" fires occur in flammable liquids and substances such as gasoline, oils, fats, etc. A "B" type extinguisher, such as carbon dioxide, dry chemical, or foam should be used on this type of fire. "A" type extinguishers, discharging a jet of water, should not be used on "B" type fires, as the water may react violently with the burning oil or gasoline, thereby spreading the fire.

Class "C" fires occur in electrical equipment and, unless the source of electrical power is disconnected, it is essential that the extinguishing agent be a non-conductor of electricity. Extinguishers having "C" classification such as carbon dioxide or dry chemical are suitable for electrical fires.

Foam, carbon dioxide and dry chemical fire extinguishers may be accepted in smaller units than those required by these regulations if sufficient numbers are provided to give the total capacity required.

### Leakage of gasoline

Inboard engines that use gasoline as a fuel should have a drip pan covered with wire gauze fitted under the carburetor as well as suitable means for preventing gasoline from leaking into the bilges. In addition, if such engines are installed

below decks, or enclosed in any way, back-fire flame arrestors should be fitted.

### **Ventilation of gasoline powered boats**

The Small Vessel Regulations require that any enclosed space in which an inboard gasoline engine is installed shall be efficiently ventilated by the installation of suitable ventilators or an exhaust fan. Although this applies only to inboard engines, it is nevertheless recommended that all enclosed spaces in both inboard and outboard powered boats be well ventilated if they contain fuel tanks or other sources of gasoline.

Explosions and fires can occur when an enclosed space is inadequately ventilated and contains an accumulation of gasoline vapours. Accidental explosions usually occur during the process of starting the engine and can produce disastrous results.

Efficient ventilation is achieved by fitting at least two ventilation ducts in each space containing engines or fuel tanks, one for exhaust and one for supply. An exhaust duct should lead from the bilges under the engines or fuel tanks to the atmosphere and a supply duct should extend from the atmosphere to a level below that of the carburetor intake. Supply and exhaust ducts should be as far apart as possible and arranged to give efficient ventilation of the space with the supply cowls at least four inches higher than the exhaust outlets. The minimum of two mentioned above may not be sufficient, depending on the size and arrangement of your boat, and additional ventilation should be fitted as necessary. Care should be taken that in boats with deep V bottoms, no pockets of gas accumulate due to lack of proper ventilation.

Each duct opening should be the same size and it is recommended that the minimum area of a duct opening should be equivalent to one square inch per foot of beam. The exterior ends of the ducts should have obstructed cowls or equivalent fittings with openings at least equal in area to the ducts.

The outlet ventilating ducts may be fitted with wind-

actuated self-trimming or rotary exhauster heads, or with a power operated exhaust fan.

If a power operated exhaust fan is fitted, the electric motor and the switch for operating the fan should be installed outside of the ventilation duct and preferably outside of the machinery space. Where this is impracticable, the motor and/or the switch may be installed within the machinery space if they are explosion-proof. A good location for the fan is just under the deck at the side.

Care should be taken to run an exhaust fan for about five minutes before attempting to start the engine.

### **Liquefied petroleum gases**

Liquefied petroleum gases such as propane, butane, etc. are coming into greater use on pleasure craft. These gases can create an even more hazardous condition on board ship than gasoline and, for this reason, their use is forbidden by law on passenger carrying ships. Propane and butane are heavier than air and will, therefore, flow rapidly into the lower parts of the boat where they are extremely difficult to dislodge.

If you should install such equipment on your boat, be sure that the installation is in accordance with that of a governmental or equally impartial authority. For this purpose, you will find the Liquefied Petroleum Gas Regulations useful. These regulations apply to boats other than pleasure craft, but the requirements are equally as sound for pleasure craft as for work boats. A copy of these regulations may be obtained by application to the Queen's Printer, Ottawa.

### **Precautions when fuelling**

1. Take portable tanks ashore.
2. No smoking.
3. Boat securely moored.
4. Hatches and doors closed.
5. No electrical switching.
6. Extinguish open flames.
7. Passengers ashore.
8. Hold nozzle firmly against fill pipe.
9. Don't overfill.
10. Wipe up any spillage.
11. Open up and ventilate.
12. Test. Use your nose.
13. Start engines.
14. Passengers re-embark.
15. Cast off.

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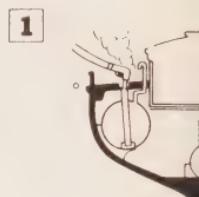
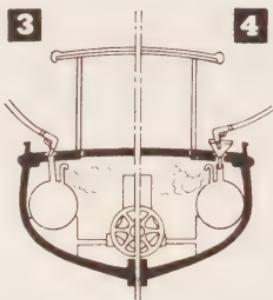
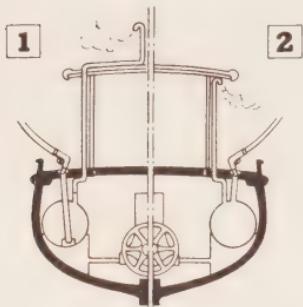
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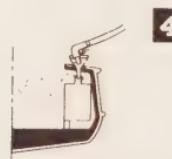
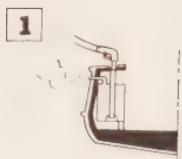
# PREPARE YOUR BOAT FOR FIRE

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### TYPES OF INSTALLATIONS



DANGEROUS  
(SHOULD BE CHANGED)



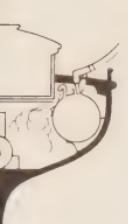
DANGEROUS  
(SHOULD BE CHANGED)

**1** **BEST INSTALLATION:** Fill pipes firmly attached to tight deck plate. Fill pipe extends to bottom of tank, with well to form liquid seal. Vent pipe discharges to open air, away from all hull openings, hatches, doors, windows, ports, etc. Outboard end of vent screened.

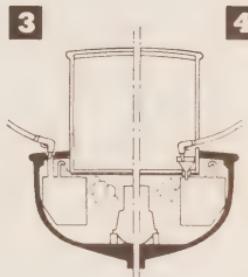
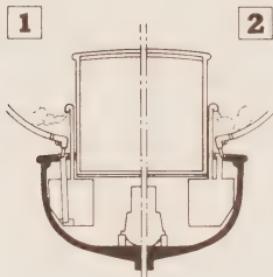
**2** **FAIRLY GOOD INSTALLATION:** Fill pipes firmly attached to tight deck plates but not extended to bottom of tank, with liquid seal well. Tank can be exploded from ignited fill pipe. Vent led to open air with screened outboard end. Location of the vent outlet should be kept clear of all hull openings.

**NOTE:** All open fires such as stoves & heaters, and all naked lights including fuel operated refrigerators must be extinguished; also all hatches & ports opening

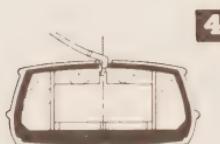
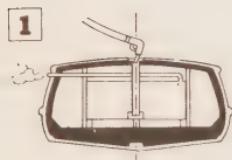
**ALL BOATS WITH BUILT-IN FUEL TANKS  
SHOULD HAVE THE FUEL SYSTEMS GROUNDED**



DANGEROUS  
(SHOULD BE CHANGED)



DANGEROUS  
(SHOULD BE CHANGED)



DANGEROUS  
(SHOULD BE CHANGED)

**3** DANGEROUS INSTALLATION: Fill pipes firmly attached to deck plates, but vent pipes discharge all vapors to inside of boat. Fumes may be ignited by a backfire, a lit match, by electrical apparatus of any kind, or by a fire in the galley stove. Unless vent pipe is led to open air, a tight deck fill pipe is NO protection.

**4** VERY DANGEROUS INSTALLATION: Both fill pipe and vent pipe end inside of hull. All vapors escape to interior of boat. Tank will overflow in filling and spill liquid fuel to bilge. Possible static spark from fill connections or funnel may ignite gasoline.  
DO NOT PLACE FILL PIPES INSIDE OF DECK HOUSES OR COCKPITS.  
DO NOT USE SMALL DIAMETER TUBING FOR VENTS. THEY WILL CAUSE BUBBLING AND SPILLING AT THE FILL PIPES.

into cabins and below decks must be closed before commencing to fill gas tanks. NO SMOKING shall be allowed either on the wharf or boat during this time.

## LIFEJACKETS

The great majority of lifejackets sold in Canada are manufactured to specifications approved by the Department of Transport and usually developed by the Canadian Government Specifications Board. Final authority for approval rests with the Department.

The main points considered by the Specifications Board are flotation, wearability, performance and durability. A jacket should have sufficient flotation material to hold the wearer's face clear of the water even when unconscious. There is a limit, however, to the amount of flotation material that can be used without making the jacket uncomfortable to such a degree the boat passenger will not wear it. The department urges that persons in small boats wear lifejackets at all times and to that end has been stressing the importance of wearability in jacket design, even where this meant some sacrifice in the amount of flotation material with which the jacket is stuffed. Too often, it has been found, persons drown because they will not wear lifejackets that are uncomfortable. When a mishap occurs, there usually is no time to don a jacket and victims are thrown into the water without anything to help them to keep afloat. For this reason, there must be a compromise between the amount of flotation in a jacket and its wearability.

Department-approved lifejackets are of two basic types, the vest type and the keyhole type, both available with either kapok or unicellular foam plastic flotation. Of the two, the vest type is probably the more comfortable to wear, but the keyhole design has the greater ability to turn the wearer face up, on his back, in the water.

Having purchased your lifejacket, try it out. Wade into water about chest-deep, and gradually bend your knees until you feel the lifejacket beginning to support you. In a few minutes you will determine the capabilities of your lifejacket. Remember, it is only a device to provide your body with buoyancy and you should become acquainted with its possibilities just as with any other unfamiliar device upon which your life may some day depend.

Kapok has the advantage of being soft, thus making a kapok-filled jacket more comfortable to wear on a hot day. The kapok is contained in vinyl bags to protect it from oil, gasoline or other agents such as detergents or cleaning fluids, which will destroy its buoyant properties. If the vinyl bag splits, through rough treatment or aging (the latter accelerated by excessive exposure to sunshine), the kapok eventually will become watersoaked and matted, and thus useless as flotation material.

If a kapok jacket feels heavy or if the vinyl bag feels hard and brittle under the canvas cover, the lifejacket should be discarded.

Unicellular foam jackets are less comfortable, but are somewhat more durable than the kapok-filled type. Rough treatment, however, will break down the foam cells and the foam also tends to shrink with aging, which is again accelerated by excessive exposure to heat. If a foam-filled jacket feels flabby or the canvas cover appears loose over the filling, the jacket should be discarded.

The department's safety checks frequently find that jackets only two or three years old are in damaged and dangerous condition because of having been used as seat cushions, footstools, or boat fenders.

It has been found that it is generally difficult for life-jackets to float small children in a safe position due to the distribution of body weight in a child, and to the fact a frightened child will try to "stand up" in the water. Approved jackets will keep them afloat, but not necessarily always face up and only close supervision of a child in the water will ensure safety.

Therefore, the MOST IMPORTANT THING TO REMEMBER is that however good a lifejacket may be, it is no substitute for parental vigilance.

As far as toddlers are concerned, they can drown if they fall face downwards in a few inches of water. Their arms are not yet strong enough to lift their bodies out of the water, so don't allow them out of your sight whether they are wearing lifejackets or not.

## **REMEMBER**

Do buy an approved lifejacket.

Make sure it is a good fit above the waist of the person concerned.

Practise with it in the water, especially with children.

See to it that ALL lifejackets in your boat are in good, serviceable condition.

## **MOST IMPORTANT**

Maintain continual parental vigilance at all times when near water.

While departmental officials are constantly striving to improve lifejacket design and construction, it must be borne in mind that a lifejacket is not a substitute for a boat and that a person in the water, even though he is wearing a lifejacket, may die from exposure to the elements or may drown in rough water.

## How to wear lifejackets



A little boy prepares for a boating trip by donning a vest-type kapok-filled lifejacket. This one is designed to support children weighing up to 50 pounds. It is vital that the tie tapes be tied tightly, so they cannot slip loose, and that the jacket be of the proper size for the wearer.



This young lad is wearing a keyhole-type foam-filled lifejacket capable of supporting a person weighing from 45 to 90 pounds.



This is a vest-type foam-filled lifejacket, fastened in front with metal snaps and pulled snugly to a fit at the waist by means of the tapes shown here. The tape should then be tied securely at the pull-through so it cannot slip loose.



Seen here is an adult-sized foam-filled keyhole-type lifejacket. The tie tapes should be pulled snugly around the waist and tied securely with a bow in front.



The proper method of using a floating cushion, of the type approved by the Department of Transport for use in small boats, is shown in these photos. Put the neck strap over the head, with the cushion worn in front of the body, as seen at left. Then pull the tapes snugly around the body and over the outside of the cushion. Tie them securely with a bow, as demonstrated.

*Never wear a cushion on the back.*

Safety cushions provide good flotation, and are usually readily available in the event of sudden capsizing or sinking.

For this reason, and because of the difficulty experienced in storing lifejackets in small boats, the substitution of approved cushions is permitted in pleasure and passenger craft not more than 18 feet in length.

Though the cushions are useful, the superior lifesaving features of lifejackets are recognized and the wearing of lifejackets, whether cushions are carried or not, is strongly recommended.

**Safety tip:** Why not mark all your safety equipment with either the name or the number of your boat? This facilitates identification in case of accident.

## **REGULATIONS**

### **EXCERPTS FROM PART VI OF SMALL VESSEL REGULATIONS**

#### **Lights for rowing boats and canoes**

A rowing boat or a canoe shall exhibit a white light in the direction of any approaching vessel in sufficient time to prevent collision.

#### **Lights for vessels at anchor**

A vessel at anchor at any place other than where small vessels are customarily left at anchor shall exhibit a white light so constructed as to show a bright white light visible all around the horizon at a distance of at least one mile.

#### **Use of searchlights**

No person shall direct the rays of a searchlight or other blinding light on a vessel under way in such a manner as to interfere with the vision of the person navigating or steering the other vessel.

#### **Special circumstances**

In obeying and construing the requirements of this Part, every operator shall have due regard to all dangers of navigation and collision and to special circumstances, including the limitations of the vessels involved and the restricted manoeuvrability of aircraft landing on or taking off from the water, and shall depart from the requirements of this Part if necessary in order to avoid immediate danger.

#### **Precautions**

Every operator shall keep a proper lookout and shall take every precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

#### **Unnecessary sounding of whistle or horn**

No person on a vessel shall sound, authorize or permit the sounding of a horn, whistle or other signalling device unnecessarily.

## **Mooring to navigational aids**

No person shall moor any vessel to any buoy, marker or beacon placed by a competent authority as an aid to navigation.

## **Obstruction of channel or fairway**

No person shall, except in an emergency, anchor a vessel in any channel or fairway in such a manner as to obstruct the normal passage of other vessels.

# **PART VII OF SMALL VESSEL REGULATIONS**

## **Powers of peace officers**

75. Any peace officer may, to the extent that it is necessary in connection with the enforcement of these regulations, go on board any vessel and make such examination of the vessel and its equipment as he deems fit and may ask any pertinent questions of, and demand all reasonable assistance from, the owner or master or any person in charge or appearing to be in charge thereof.

76. A peace officer may order detention of a vessel and may take action by other reasonable and appropriate means at his disposal to prevent violations of Parts II,\* III\*\* and IV\*\*\* of these regulations.

77. A peace officer may, in order to promote safety, direct the movement of vessels; but, except in an emergency, no such directions shall be given in respect of vessels in a public harbour for which a harbour master is appointed, without the prior consent of the harbour master.

78. A signal to stop may consist of a series of short, sharp blasts on a siren, whistle, horn or other sounding device, or any other readily understandable signal given by a vessel carrying a peace officer.

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\*Safety equipment for pleasure craft.

\*\*Equipment for passenger carrying vessels not over 5 tons.

\*\*\*Equipment for power-driven vessels not over 15 tons, that do not carry passengers and are not pleasure craft or fishing vessels.

79. Every person shall obey any order given by a peace officer pursuant to these regulations.

## PART VIII OF SMALL VESSEL REGULATIONS

### Offences and penalties

80. Any person who fails to license and mark a vessel in accordance with the Act or these regulations is guilty of an offence and is liable on summary conviction to a fine not exceeding one hundred dollars.

81. Every person who fails to comply with or contravenes a regulation for which no other penalty is provided is guilty of an offence and is liable on summary conviction to a fine not exceeding one hundred dollars and, in default of payment, to a term of imprisonment not exceeding two months.

82. Every person who is the owner, charterer, hirer, master, operator or person in charge of a vessel that is operated contrary to the provisions of these regulations shall be deemed to have contravened such provisions unless, in any prosecution for such contravention, he establishes that the contravention took place without his knowledge or consent or that he exercised all due diligence to prevent its commission.

### Reckless operation

Motor boats, at high speed, can be particularly dangerous because of their wash or wake capsizing other craft, threatening swimmers and damaging shore installations, moored vessels, etc. A good look-out ahead must be kept at all times.

Reasonable speed must be maintained when circumstances demand it. It should also be remembered that a motor boat has no more right to the use of the water than any other craft and that, beyond any legal aspects, it is only fair that consideration be shown for others.

The annoyance of noise and wash from motor boats is frequently the subject of complaints in this respect.

Reckless operation is dealt with under the Criminal Code, which provides for fines up to \$500 and a possible ban on operation on any Canadian waters for one year.

Section 226(A) of the Code states that it is an offence to navigate or operate ". . . any vessel or any water skis, surf board, water sled or other towed object . . . carelessly, or in a manner or at a speed that is dangerous to navigation, life or limb, having regard to all the circumstances . . ."

Other offences are:

Failing to stop after being involved in a boating accident; operating a boat while impaired by alcohol or drugs; water skiing during the period from one hour after sunset to sunrise; failing to have at least two persons in the towing boat while water skiing.

Although enforcement of the various regulations is the responsibility of peace officers, i.e. members of the different police forces, it should be remembered that every boat operator has a personal responsibility to be aware of his obligations and privileges on the water. A list of the various statutes and regulations governing the operation of small boats will be found at the beginning of this book.

## Aircraft

Operators of pleasure craft should be aware that when float planes are taxiing on the water, the pilot's forward vision is somewhat restricted, except when the plane is moving slowly with the engine idling. When power is applied and the aircraft is committed to take-off, it is no longer possible for the pilot to make any sudden change of course.

An aircraft approaching to land gradually slows down and in so doing becomes gradually less manoeuvrable until the point of contact with the water surface, when it is even less manoeuvrable than during the take-off. In addition, during the landing the nose of the aircraft is held fairly

high, making it more difficult for the pilot to see any object that may unexpectedly cross the intended landing path.

In view of these facts, small boat operators are advised to take every precaution to avoid interfering with aircraft under way on the water and particularly when one is landing or taking-off, in which case every effort should be made to hold a steady course in order that the pilot of the aircraft may be able to select a clear path.

## MARINE CHARTS AND RELATED PUBLICATIONS

Charts are designed to meet the needs of marine navigation. They show the shoreline, depths of water and the landmarks, beacons and buoys that help the navigator make a safe passage to his destination. It is always wise to study the chart before making a trip so that a safe route can be thought out in advance and the proposed tracks laid down. It is also good policy to note one's position at regular intervals during the trip so that if a fog or heavy rainstorm should suddenly block out the landmarks the navigator will know where he is and what course to follow to reach either his original destination or the nearest safe haven.

In many of the larger cities, yacht clubs and power squadrons give instruction on the use of charts. There are also many publications dealing with this subject and it is recommended that the amateur navigator study these.

Although charts supply a wealth of detail, there is much information which the mariner needs which they cannot show. "Sailing Directions" are, therefore, published which contain a description of the coast and harbours, availability of fuel and supplies, speed limits and similar information.

In tidal waters information on tides and currents is important. This is published annually in the form of separate volumes for the Atlantic and Pacific coasts or pocket editions covering specific areas.

The Canadian Hydrographic Service will supply, on request and without charge, an information bulletin showing the chart coverage available for any specified area in Canada, together with a list of useful marine publications and the authorized agents from whom they may be purchased. Requests for these bulletins should be addressed to:—

Marine Chart Distribution,  
Canadian Hydrographic Service,  
Department of Energy, Mines and Resources,  
615 Booth Street,  
Ottawa, Ontario.

Canadian *Notices to Mariners*, published weekly, contain important information including amendments to Canadian charts, lists of lights and fog signals, and lists of radio aids to marine navigation. These notices may be obtained free on request to:

Chief, Aids to Navigation,  
Department of Transport,  
Ottawa, Ont.

## CANALS AND SEAWAY INFORMATION

Information on the passage of pleasure boats through the St. Lawrence Seaway may be obtained on inquiry addressed to:

St. Lawrence Seaway Authority,  
(Pre Clearance)  
P.O. Box 98,  
Cornwall, Ontario.

### Seaway warning

Pleasure craft operators are warned to keep well clear of commercial shipping while navigating in canals and channels of the St. Lawrence Seaway. They endanger their own lives and imperil larger vessels by operating their craft dangerously.

Large vessels cannot leave the main channels and cannot readily manoeuvre to avoid collision. When under way, large ships create waves and suction dangerous to small boats.

### **Other canals**

The following canals in Canada, St. Peters, Canso, St. Ours, Chambly, Ste. Anne, Carillon, Rideau, Murray and Trent, are operated by the Department of Transport. The department publishes a descriptive book called "Navigation Canals" giving full information on mileage and general data.

"Navigation Canals" can be obtained free of charge by writing to:

Information Services  
Department of Transport  
Room 604, Hunter Building  
Ottawa, Ont. Canada

It can also be obtained without charge from any of the three Canals district offices listed below.

In addition to the above, the Trent, Rideau and Quebec Canals Offices prepare sailing instructions. Boat operators proposing to navigate any of the canals under the jurisdiction of the Department of Transport should request, from the Superintending Engineer of the canal concerned, a copy of the current edition of a descriptive circular which includes sailing instructions. These circulars are available on request at no charge from the following Canal Offices:—

Trent Canal Office, P.O. Box 567, Peterborough, Ont.

Rideau Canal Office, P.O. Box 902, Ottawa, Ont.

Quebec Canals Office, Place Delorimier, Suite 900,  
2120 Sherbrooke St. East, Montreal 24, Quebec

## **RESUSCITATION BY ARTIFICIAL RESPIRATION**

It is to everybody's benefit to have some knowledge of artificial respiration. Information on this subject may be obtained from:

Information Services,  
Department of National Health and Welfare,  
Ottawa, Ont.

## **SEARCH AND RESCUE**

The Department of Transport maintains Coast Guard Rescue Officers at the RCAF Search and Rescue centres at Halifax, N.S., Trenton, Ontario and Vancouver, B.C. Each of these centres is the headquarters for a co-ordinated network of agencies trained to search for and rescue vessels in distress.

The Coast Guard Rescue Officers at these centres distribute booklets covering the marine rescue organization for their respective areas. These booklets may be obtained free of charge on application to the following:—

### Atlantic Area:

Coast Guard Rescue Officer,  
Room 121 Maritime Headquarters Command,  
H.M.C. Dockyard, Halifax, N.S.

### Great Lakes Area:

Coast Guard Rescue Officer,  
Air Transport Command,  
Canadian Forces Base,  
Trenton, Ont.

### Pacific Area:

Coast Guard Rescue Officer,  
Federal Building,  
Vancouver, B.C.

Here is how you and your fellow power boat operators and owners of sailboats can assist in searches and help cut down on false alarms:

- (a) Your boat or yacht club should appoint a safety officer for the day or week and all arrivals and departures should be reported to him.
- (b) If you plan to go on a cruise, give your safety officer an itinerary with estimated times of departure and arrival at your destination.
- (c) If you do not belong to a yacht club, you should acquaint a relative, neighbour or some responsible adult with your itinerary and arrange to contact them when you have arrived at your destination.
- (d) They should be instructed that if you do not contact them by a certain time to get in touch with one of the three search and rescue centres.
- (e) If you change your plans while under way, call your home club or the person that knows your plans and possibly the police. This allays worry and prevents a needless alert that might set off a comprehensive air and marine search.
- (f) Carry the required charts and a serviceable compass in your boat at all times.
- (g) Always carry the international distress signal. This is a square flag or an object resembling a square flag, and a ball or other circular object hoisted either above or below it. Flag and ball need not be of any particular colour, but the brighter they are, the better.

The signal may be made up of metal shapes which fold up when not in use. When hoisted, it will not only be visible at sea, but can also be picked up by radar, both horizontally and vertically, from the surface as well as from the air. It may be made from fabric coloured bright orange, 72 inches

by 45 inches in size, upon which are painted a large black disc and square. This is laid flat upon the cabin or wheelhouse top and can be seen very clearly from the air.

Other forms of distress signals are:

- (a) A gun or other explosive fired at intervals of about a minute;
- (b) A continuous sounding with any fog-signal apparatus;
- (c) Rockets or shells, throwing red stars fired one at a time at short intervals;
- (d) A signal made by radiotelegraphy or by any other signalling method consisting of the group . . . — — — . . . in the Morse Code.
- (e) A signal sent by radiotelephony consisting of the spoken word "Mayday";
- (f) The International Code Signal of distress indicated by N.C.;
- (g) Waving of any unusual object, such as a piece of cloth or shirt tied to an oar or paddle.
- (h) Flames on the vessel (as from a burning tar barrel, oil barrel, etc.);
- (i) Red signal Marine Distress flare.

Two-way radiotelephone can provide a very effective means of obtaining help in cases of emergency if properly used. Coast Stations operated by the Department of Transport are strategically located on the sea coasts and Great Lakes in Canada. All these stations maintain guard on international radiotelephone distress and calling frequency of 2182 Kc/s during the season of navigation. A similar service is provided on the U.S. coasts by the U.S. Coast Guard.

Many thousands of Canadian pleasure and commercial craft are fitted with radiotelephone and also maintain guard on 2182 Kc/s while at sea.

If you use two-way radiotelephone aboard your boat, the greatest efficiency in communication can be obtained by applying the correct procedures for calling and answering other stations and passing messages or information. Such procedures and other pertinent information relative to the licensing and operating of radiotelephone equipment may be found in the Department's booklet entitled "Radiotelephone Handbook" (Maritime Services) which can be obtained free of charge from any Radio Inspection Office, Telecommunications and Electronics Branch, Department of Transport.

## TIPS FOR OUTDOORSMEN

Having read the Do's and Don'ts elsewhere in this book, here are some extra tips for you.

- (a) Do not wear high cut boots, particularly of the open top rubber boot variety, in open boats. Carry a second pair of ankle boots for wearing in the boat.
- (b) Do not stand up to fish or hunt in small boats; remain seated.
- (c) Be particularly careful that, with your extra clothing and equipment, you do not overload your boat.
- (d) Do not attempt to take a small boat out into water where, if the weather deteriorates, you are unable to reach safety quickly.
- (e) Canoes should not be used for fishing or hunting, unless you are an experienced canoer. These craft are particularly dangerous if not handled by an expert.
- (f) Your chances of survival, when falling into the water in the fall or spring, are reduced considerably because of the low water temperature.

## **BOATER'S QUESTIONNAIRE**

**1. Which side is which?** Port side is the left side and starboard is the right side facing forward. — True  False

**2. What colour of lights?** Red to port, green to starboard. — True  False

### **3. Rules of the road**

- (a) Two power boats are meeting head on. Each alters course to starboard. — True  False
- (b) You are in a power boat. Another power boat is approaching from starboard on a collision course. — Would you give way  or would you stand on?
- (c) Power boats have to give way to sail boats, row-boats and canoes. — True  False
- (d) You are about to overtake another boat. — Would you keep clear  or would the vessel ahead keep out of your way?

### **4. Licensing and capacity plates**

- (a) A pleasure boat under 20 tons must have a boat licence if it has an engine of 10 H.P. or more. — True  False
- (b) Outboard boats 16 feet in length or less must have a DOT load and capacity plate when fitted with a motor of 10 H.P. or more. — True  False

## **5. Equipment**

- (a) Power boats and sailboats must carry an approved lifejacket for each person on board. — True  False
- (b) Your lifejacket is required to bear the "approved" label of the D.O.T. — True  False

## **6. Boat operation**

- (a) When towing a water skier, you must have at least two persons in the boat. — True  False
- (b) It is illegal to water ski from one hour after sunset to sunrise. — True  False
- (c) It is an offence if you do not stop after being involved in a boat accident. — True  False
- (d) It is an offence to operate a boat while impaired by alcohol or drugs. — True  False



FOR VESSELS NOT OVER 65 FEET IN LENGTH, IN CANADIAN WATERS

**LIGHTS**  
TO BE CARRIED FROM SUNSET TO SUNRISE

Boats sailing on both East and West seagoats of Canada must be equipped with lights marked by an asterisk.\*

SEE WARNING BELOW

**BOW VIEW**

**SIDE VIEW**

**PLAN VIEW**

**UNDER POWER ALONE**

**OVER 26' IN LENGTH**

**26' AND UNDER IN LENGTH**

**OVER 26' IN LENGTH**

**26' AND UNDER IN LENGTH**

**OVER 26' IN LENGTH**

**UNDER SAIL ALONE**

**OPTIONAL MASTHEAD LIGHTS**

**SYMBOLS FOR LIGHTS**

**WHISTLE SIGNALS**

**DO'S AND DON'TS**

**REQUIREMENTS FOR PLEASURE CRAFT**

**EQUIVALENT FIRE EXTINGUISHERS**

**RACING VESSELS**

